

FIG. 1A

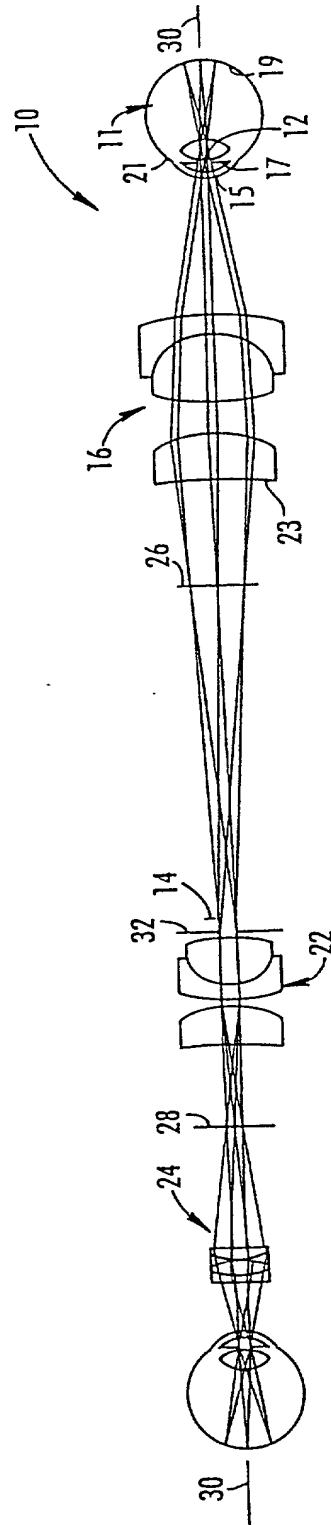


FIG. 1B

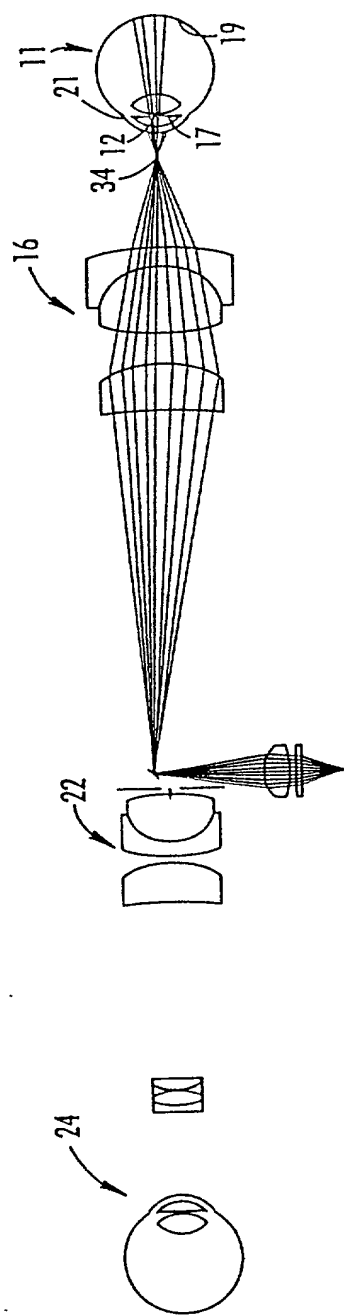


FIG. 1c

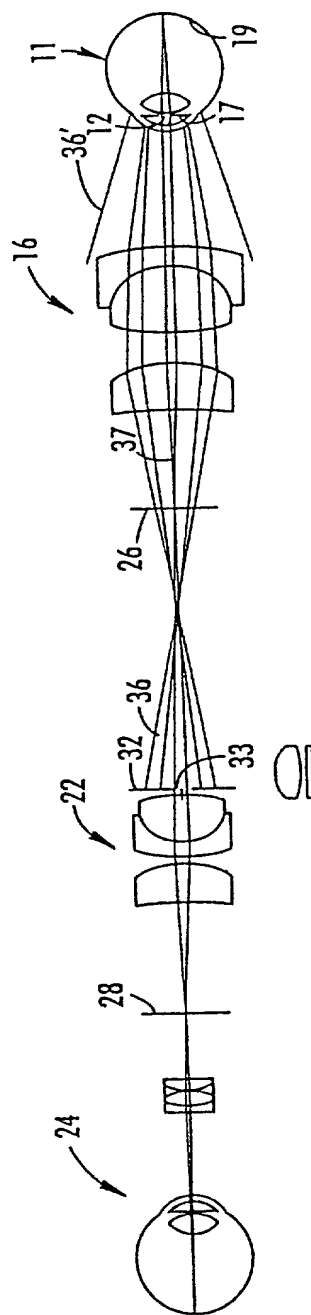


FIG. 1D

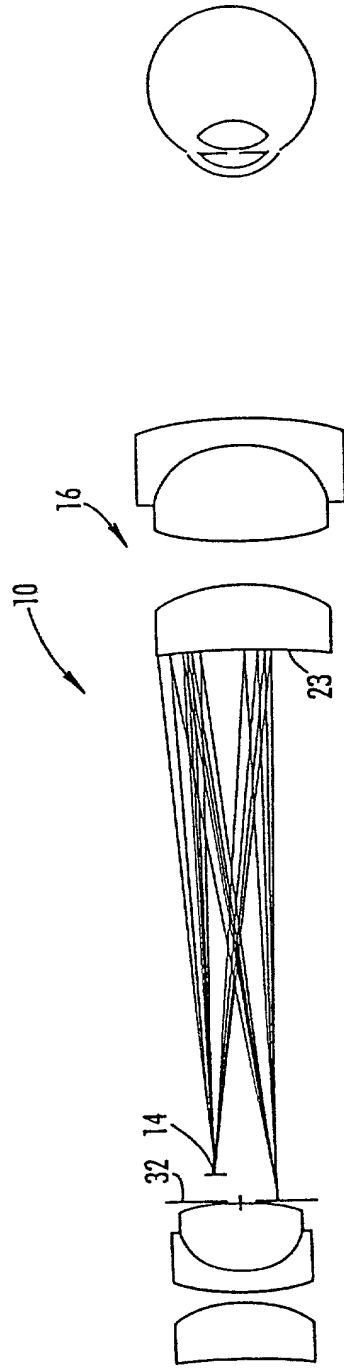


FIG. 1E

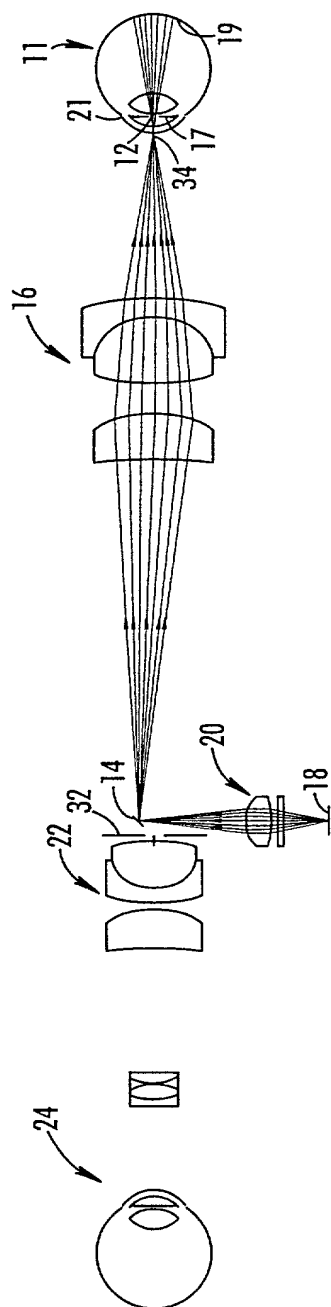


FIG. 2a

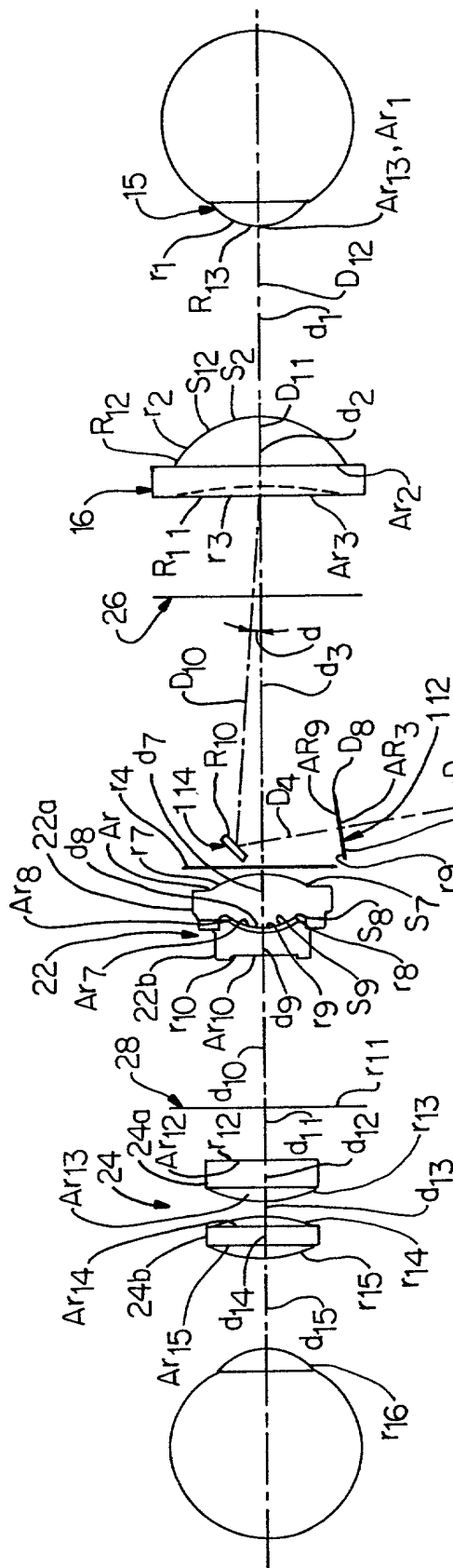


FIG. 2B

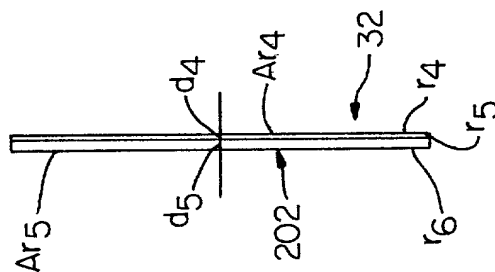


FIG. 2C

FIG. 3A is a schematic diagram of an optical system 10 in a first configuration. The system includes a light source 11, a lens 12, a lens 15, a lens 17, a lens 19, a lens 21, a lens 22, a lens 24, a lens 26, a lens 28, and a lens 30. The lenses are arranged in a series along an optical axis. The light source 11 emits light that passes through the lenses in sequence. The lens 12 is a biconvex lens, the lens 15 is a biconvex lens, the lens 17 is a biconvex lens, the lens 19 is a biconvex lens, the lens 21 is a biconvex lens, the lens 22 is a biconvex lens, the lens 24 is a biconvex lens, the lens 26 is a biconvex lens, the lens 28 is a biconvex lens, and the lens 30 is a biconvex lens. The light rays are shown as straight lines passing through the centers of the lenses. The system is labeled 10.

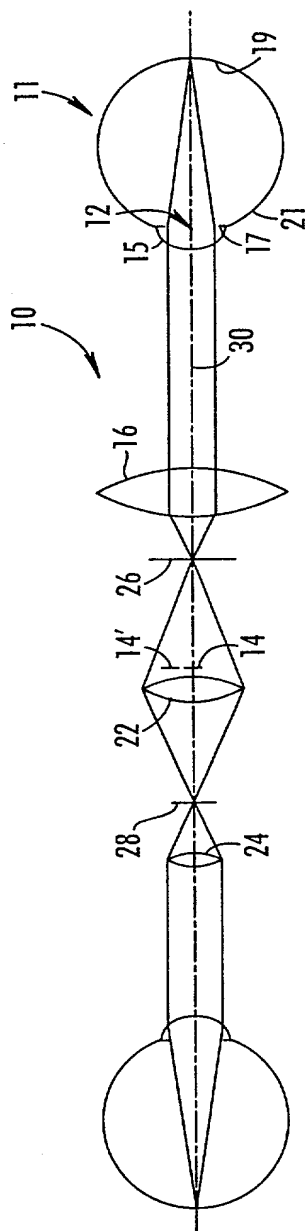


FIG. 3A

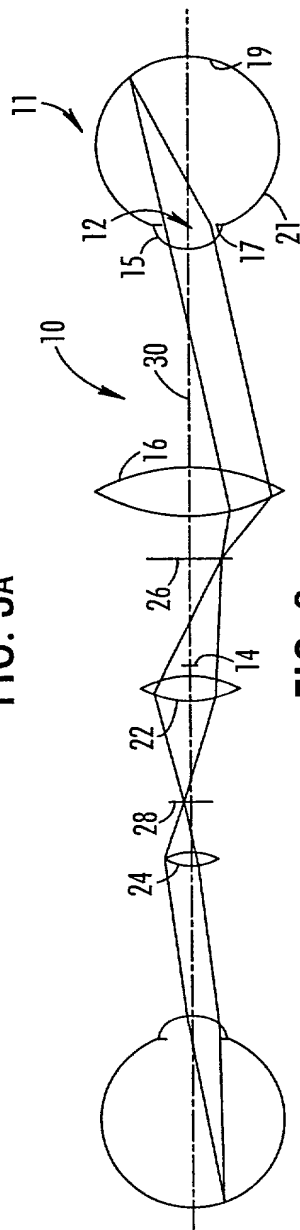


FIG. 3B

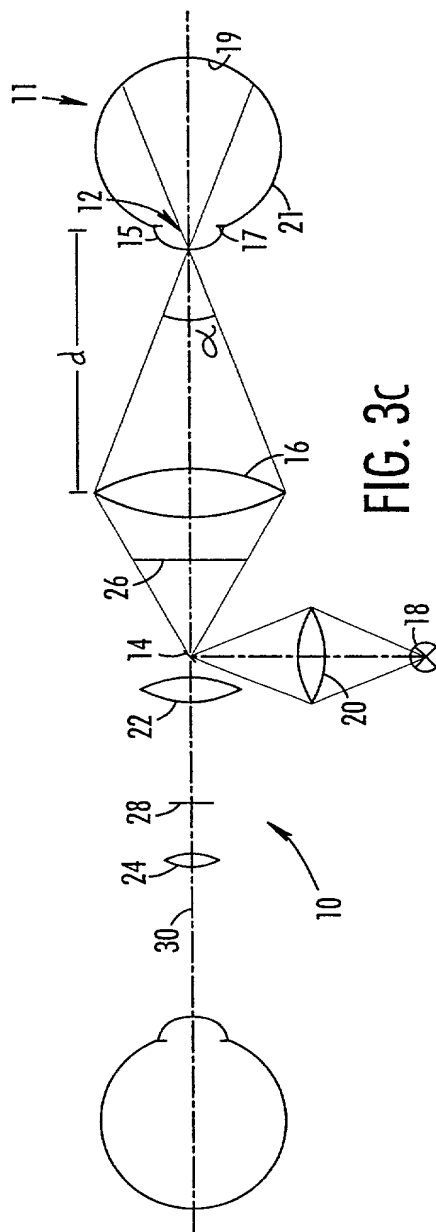


FIG. 3C

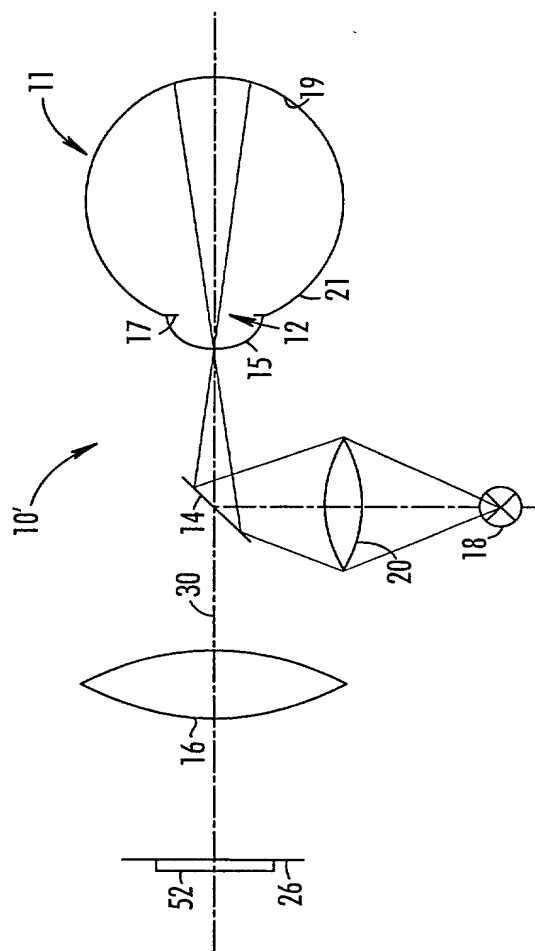


FIG. 4

FIG. 5 is a schematic diagram of an optical system 10' according to one embodiment of the present invention. The optical system 10' includes a light source 74a, a light source 74b, a beam splitter 72, a lens 76, a lens 78, a lens 80, a lens 11, a lens 12, a lens 15, a lens 17, a lens 19, a lens 21, a lens 26, a lens 30, a lens 32, a lens 14, a lens 22, a lens 28, a lens 70, and a lens 16.

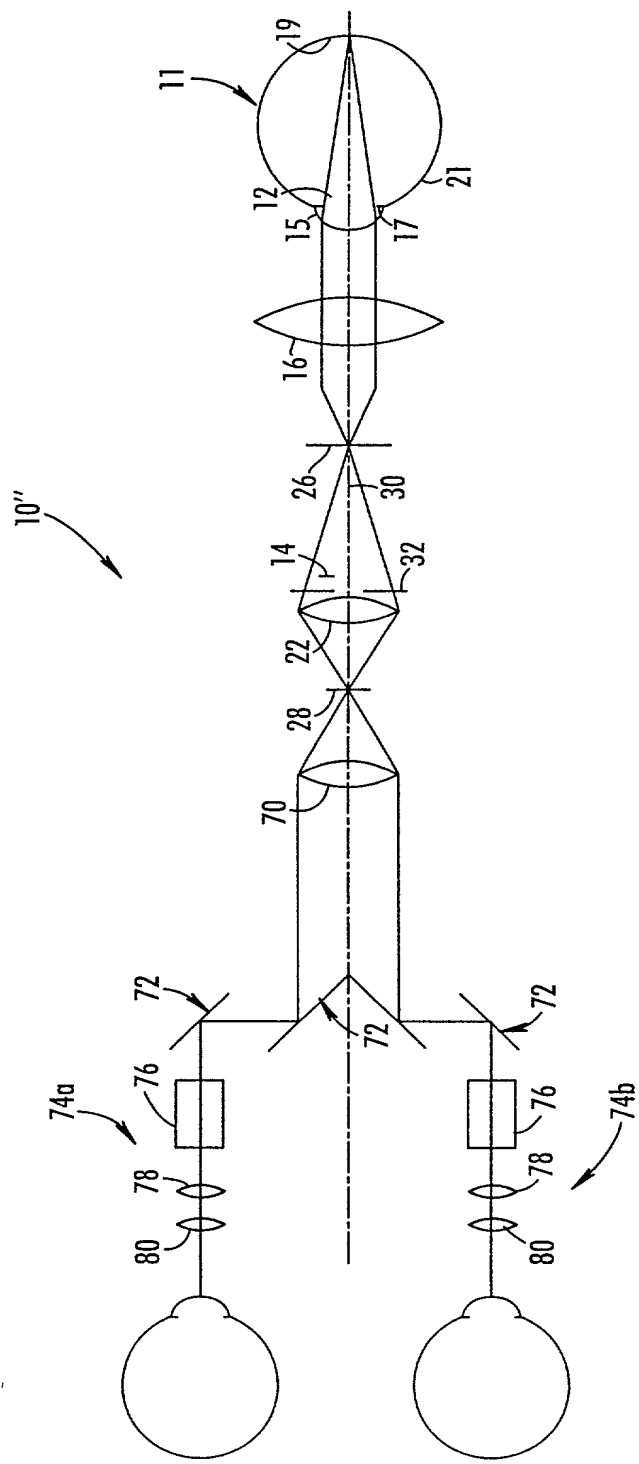


FIG. 5

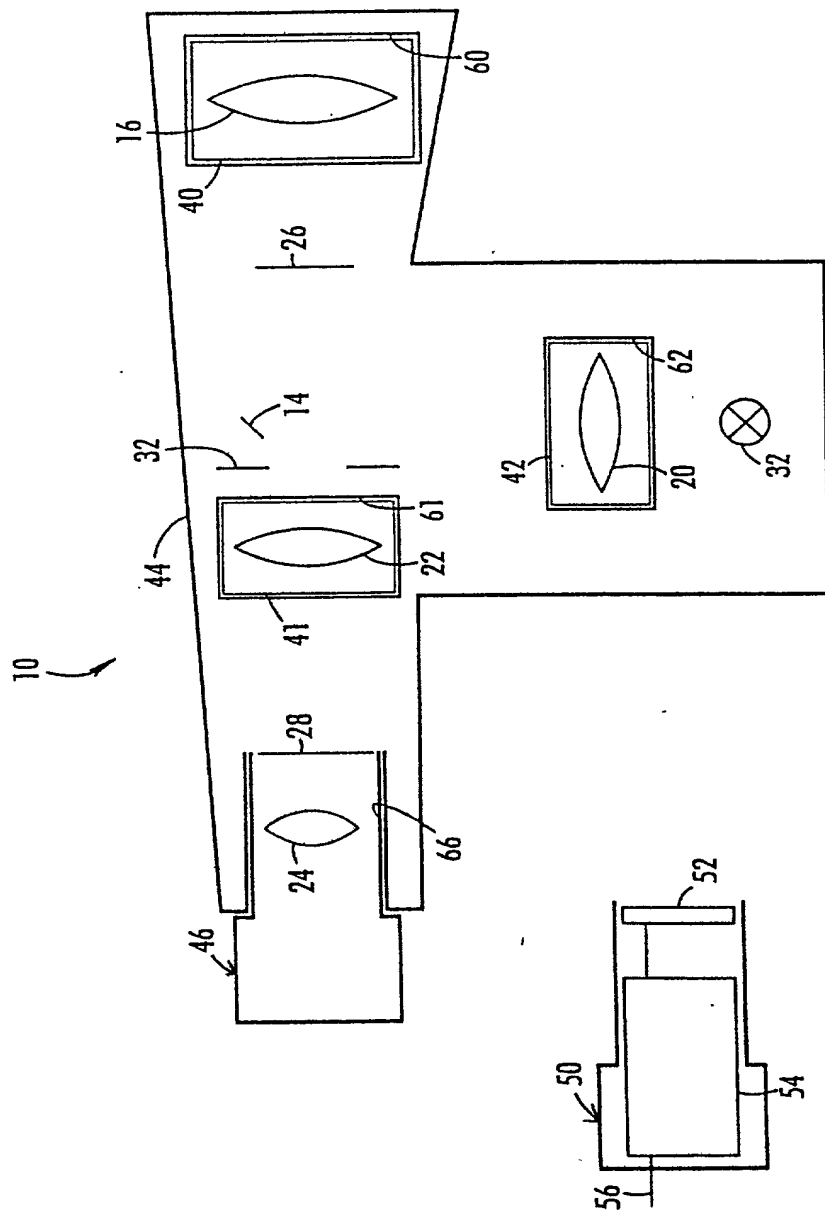


FIG. 6A

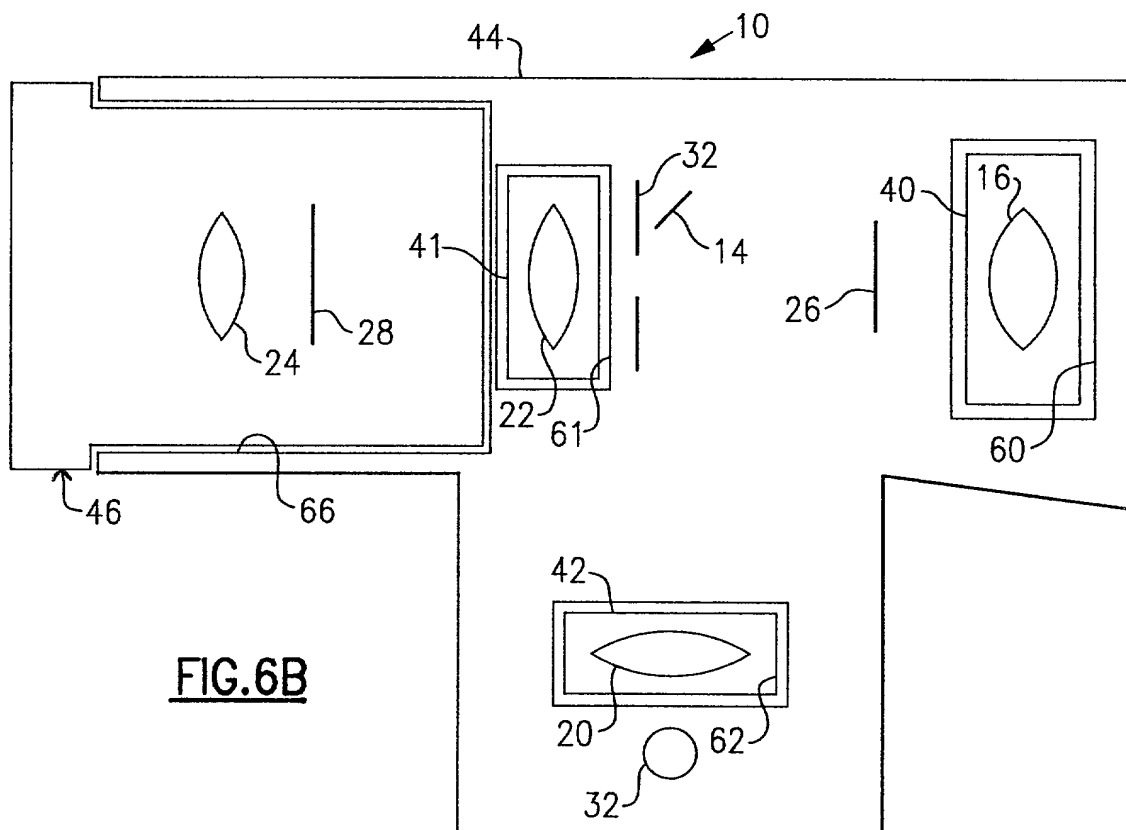


FIG. 6B

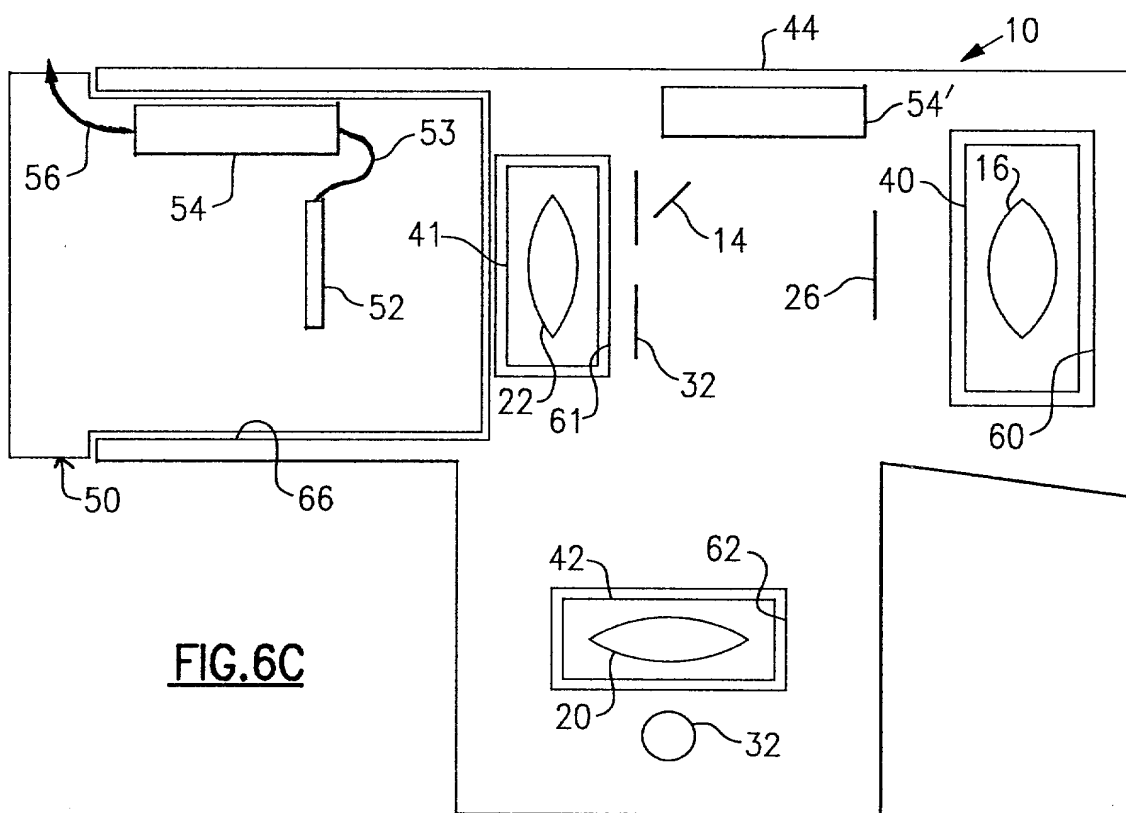
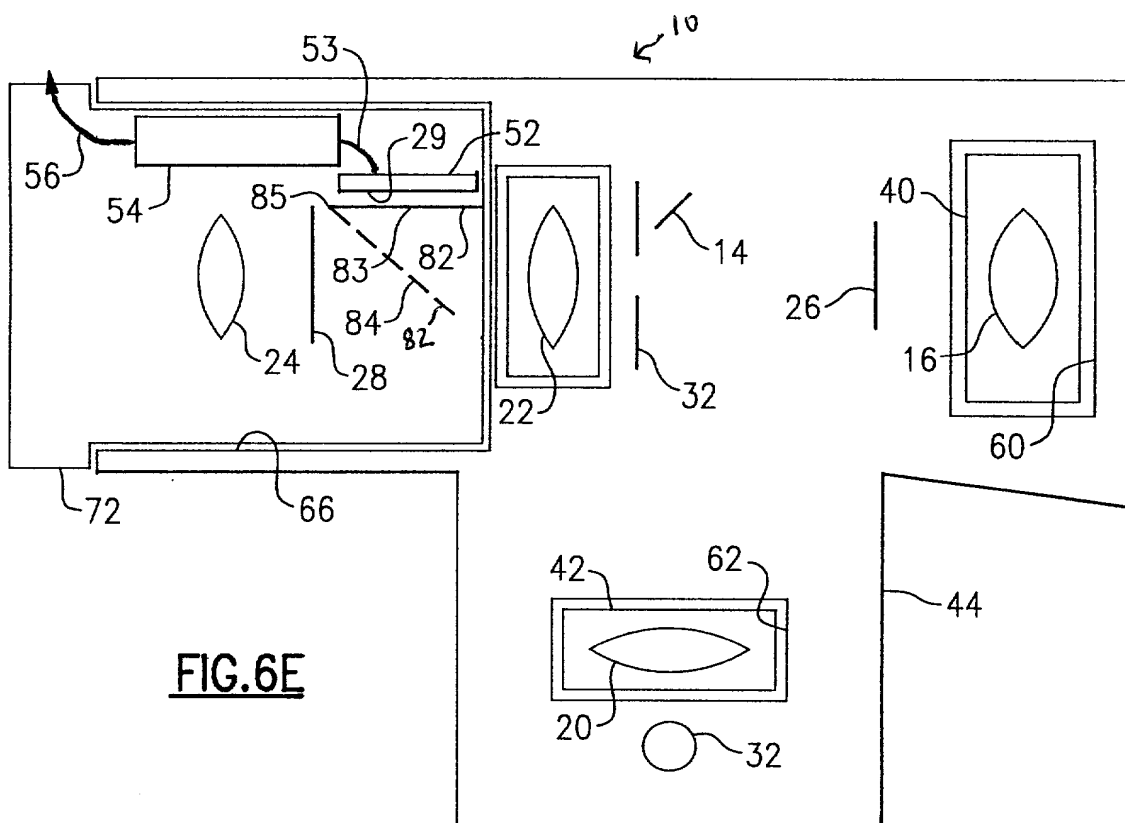
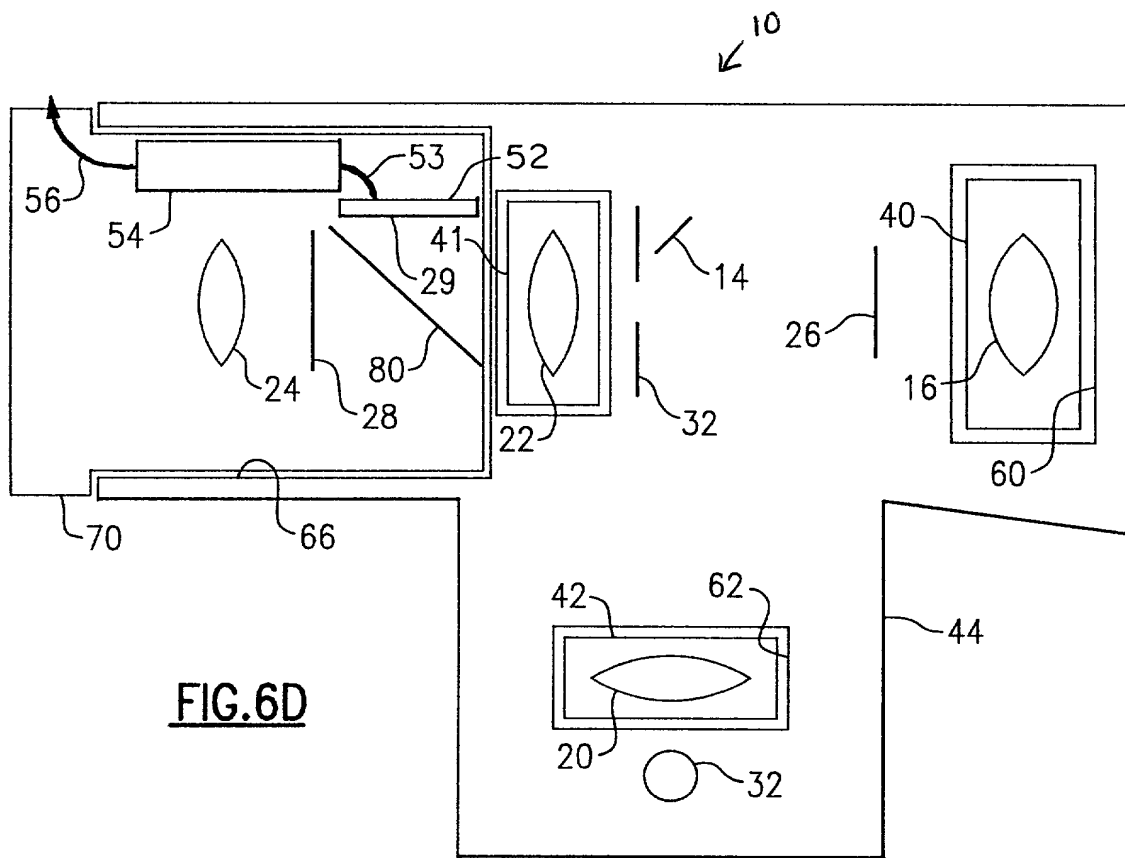
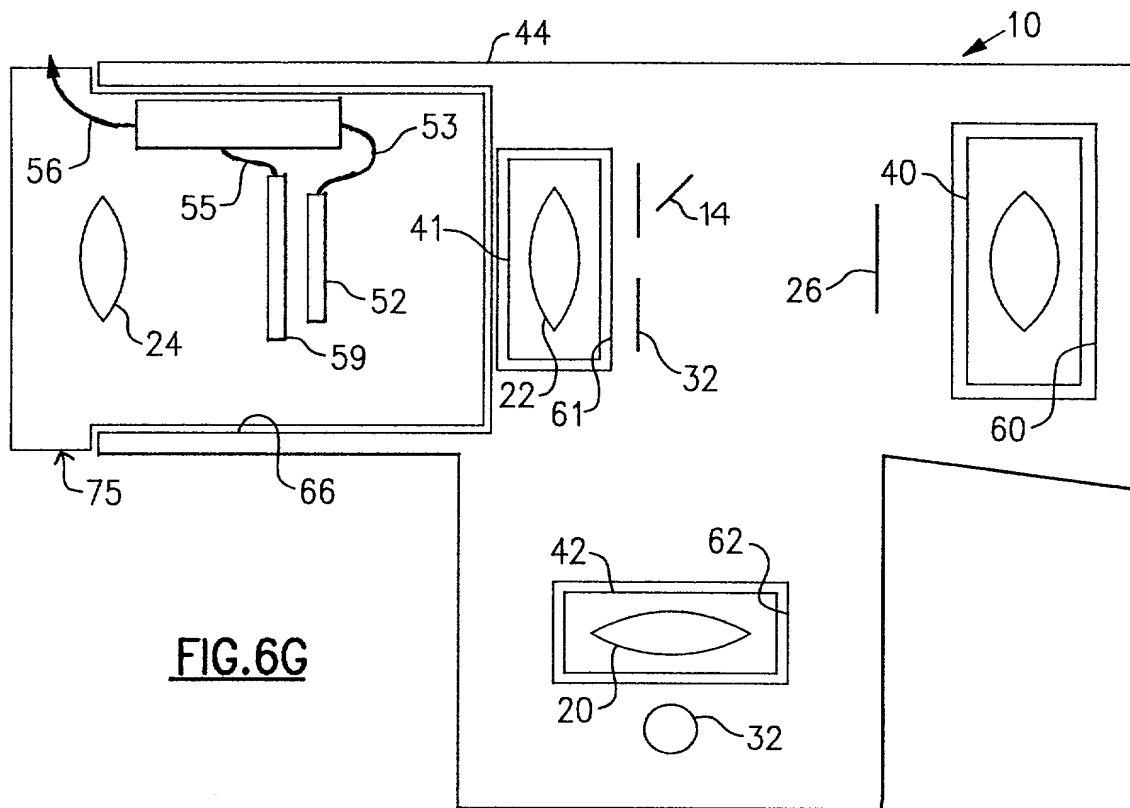
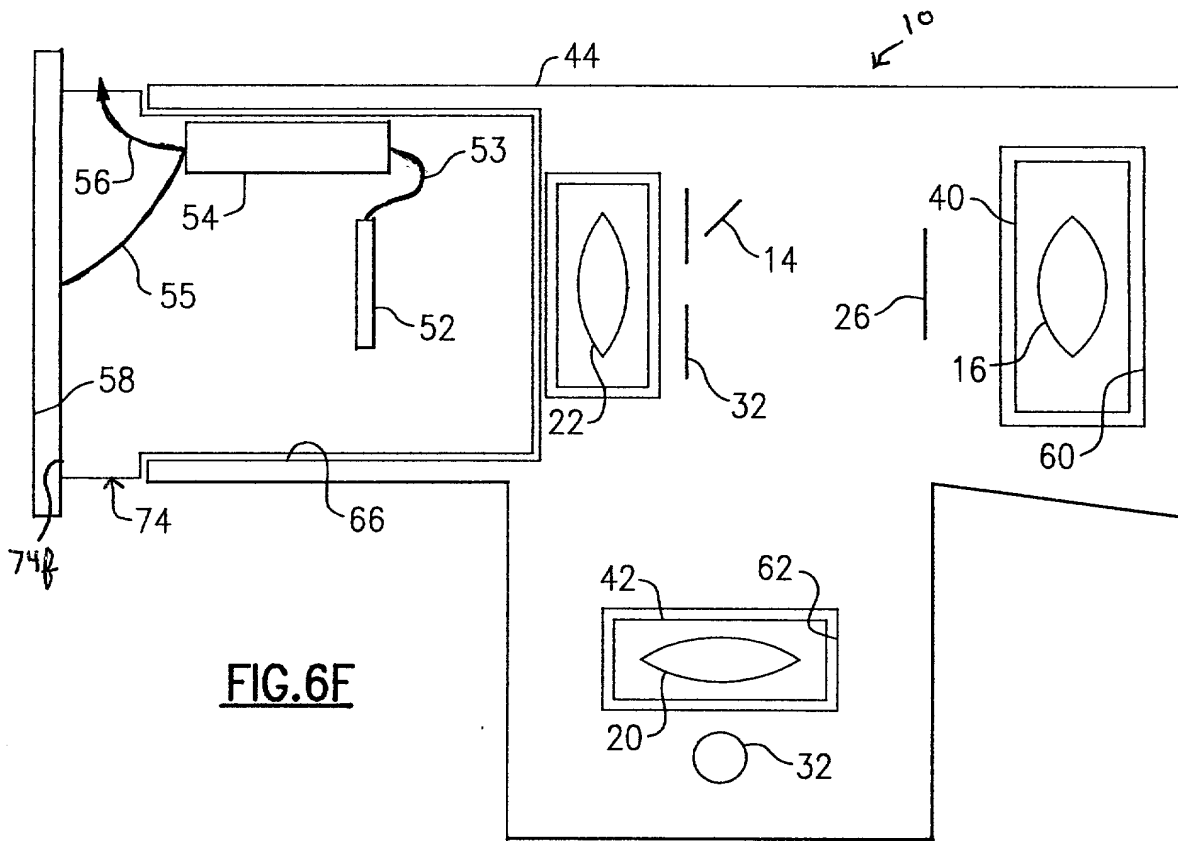


FIG. 6C





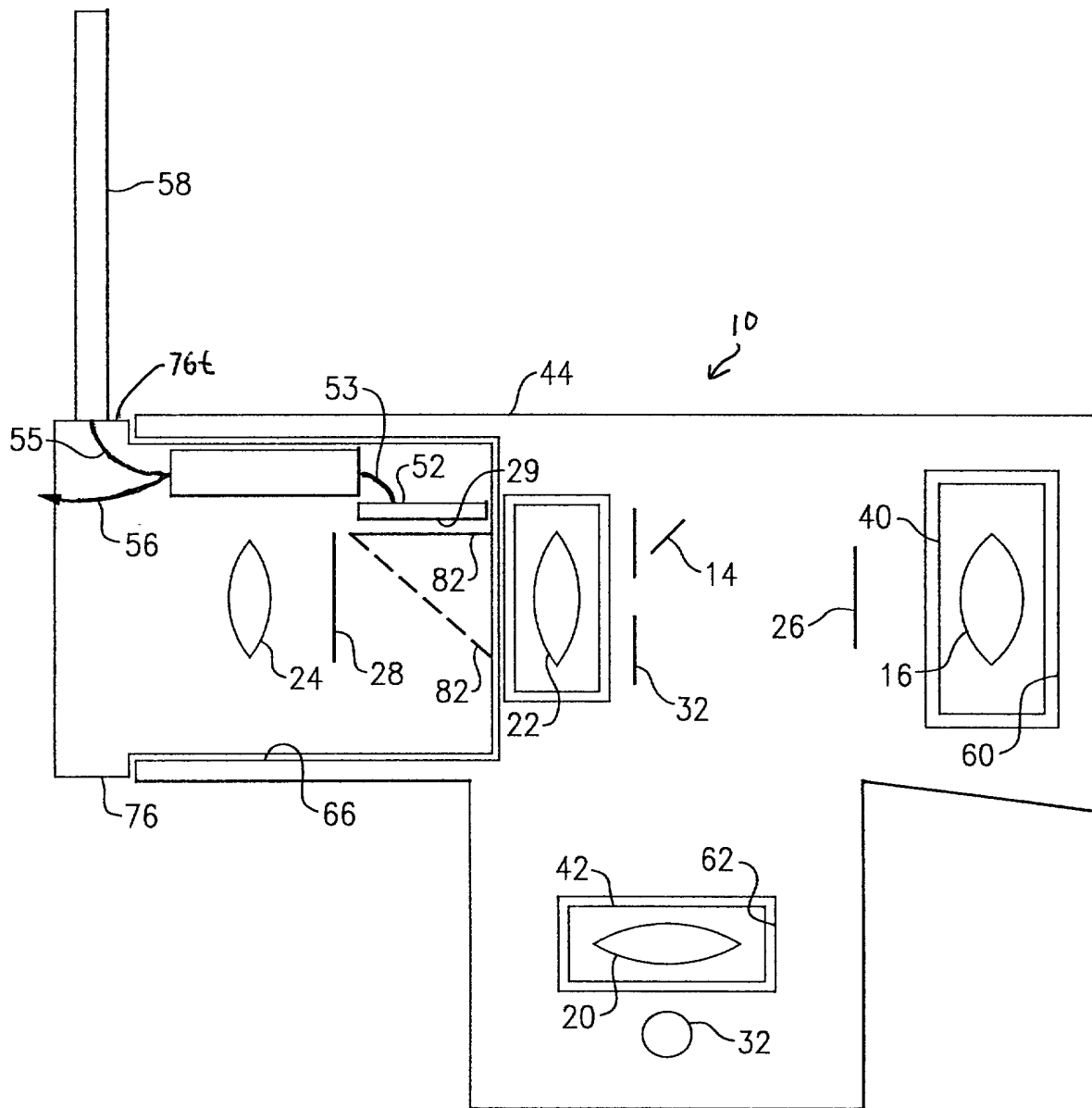


FIG. 6H

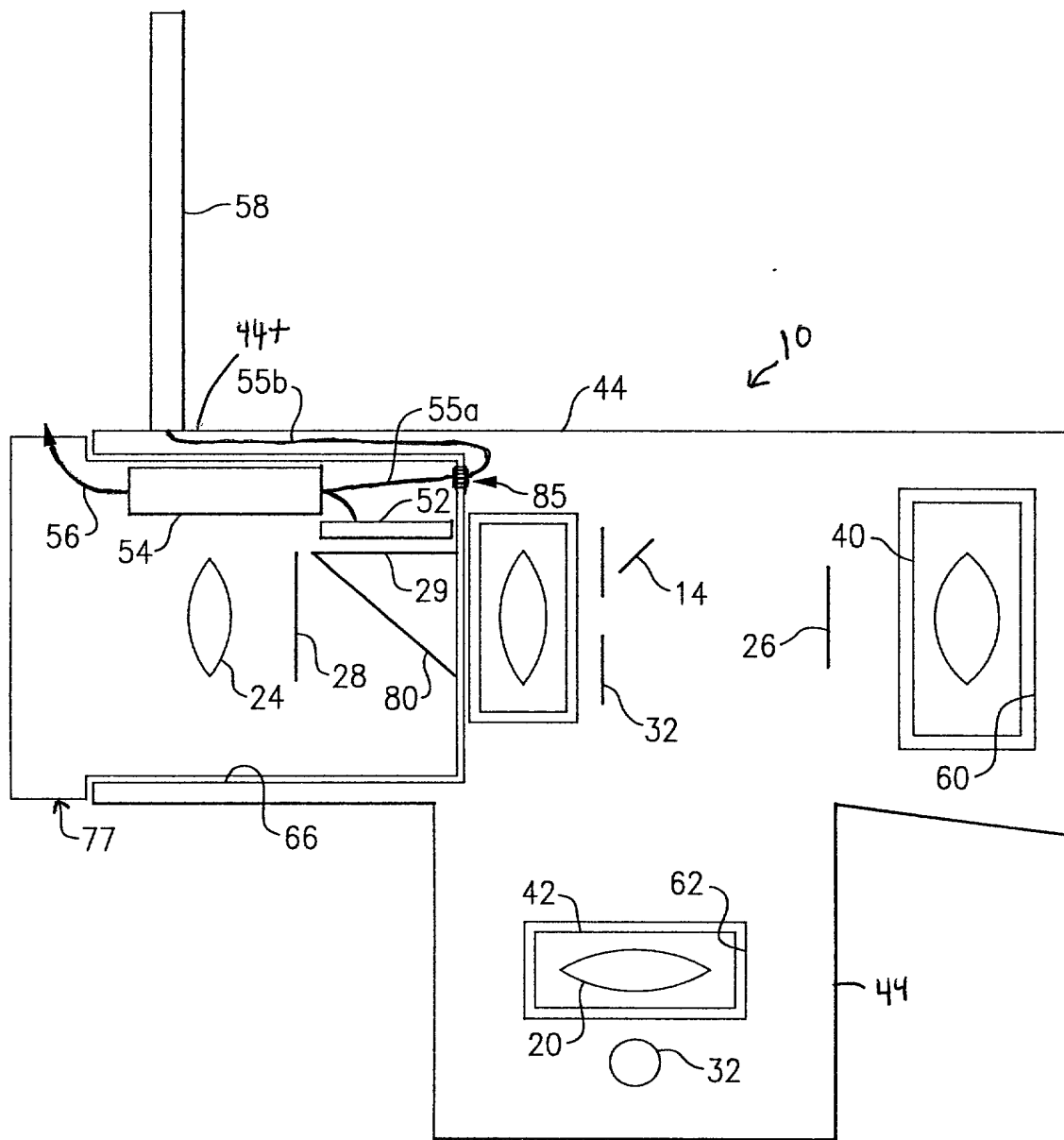


FIG. 6I

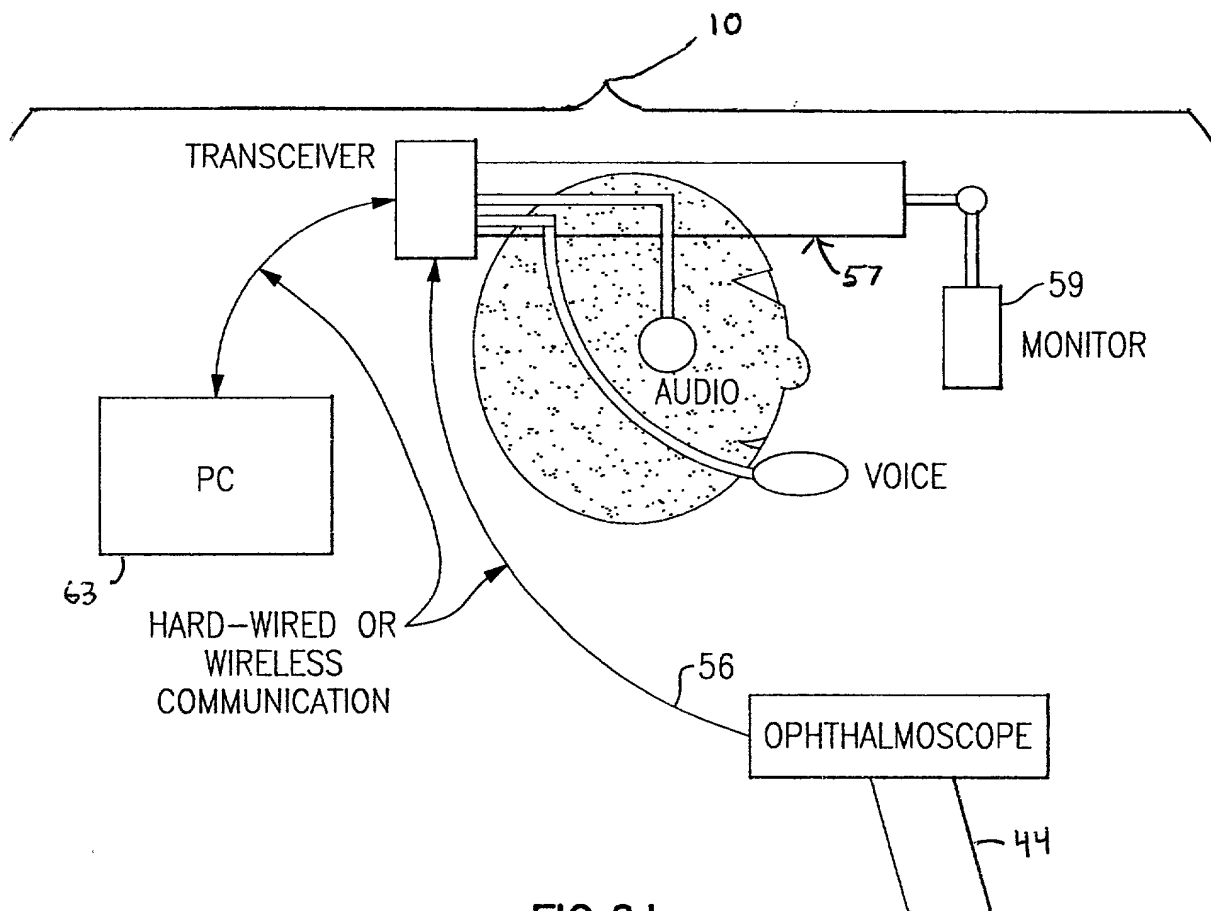


FIG. 6J

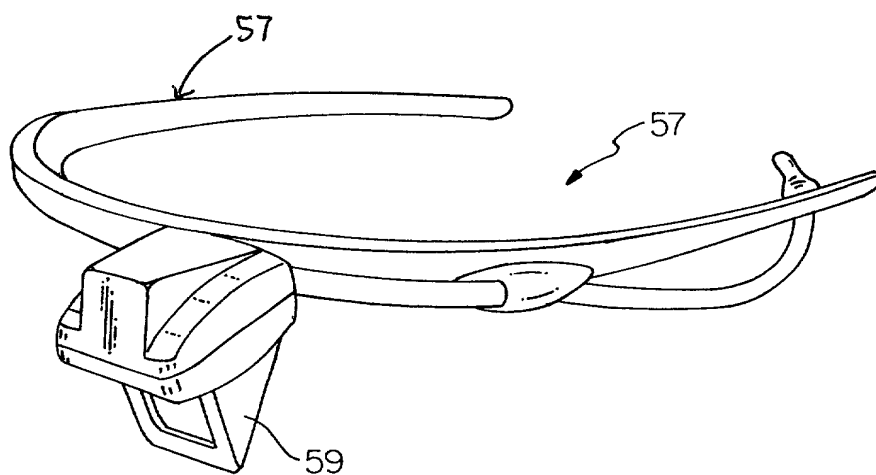


FIG. 6K